

Statement of Considerations

REQUEST BY ALLIEDSIGNAL, INC., CERAMIC COMPONENTS FOR AN ADVANCE WAIVER OF DOMESTIC AND FOREIGN RIGHTS IN SUBJECT INVENTIONS MADE IN THE COURSE OF OR UNDER DEPARTMENT OF ENERGY CONTRACT NO. DE-AC05-85OR21400; SUBCONTRACT NO. 85X-SH596C; DOE WAIVER DOCKET W(A)-96-011 [ORO-628]

AlliedSignal, Inc., Ceramic Components (AlliedSignal) has made a timely request for an advance waiver to worldwide rights in Subject Inventions made in the course of or under Department of Energy (DOE) Contract No. DE-AC05-85OR21400, Subcontract No. 85X-SH596C. The scope of the work calls for the development of silicon nitride ceramic materials with elongated grain structures to meet requirements for heat engine applications. This is Phase II of this contract. Under Phase I a basic in situ reinforced silicon nitride material, AS800, was developed. Phase II builds on Phase I to further improve material properties and processing. A waiver request for rights to inventions made under Phase I has been granted, W(A)-92-011, ORO-530. The work is sponsored by the Office of Transportation Technologies, B&R Code EE5101000.

The dollar amount of the Phase II of the subcontract is estimated to be \$816,614 with AlliedSignal cost sharing 20% of the subcontract.

AlliedSignal is a corporation having a business emphasis on production of ceramic components for high technology applications such as the aerospace and land vehicle markets. In material development, it has expertise in high temperature, structural and wear resistant silicon nitride ceramics. Its process development emphasizes net shape forming using pressure slip casting and injection molding forming methods. Additionally, AlliedSignal has patents covering technology under the general scope of the contract. Therefore, AlliedSignal's experience and expertise will contribute substantially to commercialization of the inventions made under the subcontract.

AlliedSignal is a commercial source of high speed rotating machinery including turbines, compressors, generators, Brayton cycle engine/generator sets, aircraft propulsion engines of tyrboprop and turbofan types, turbine engines for industrial and surface vehicle propulsion, and many other related systems and parts thereof to numerous nongovernmental customers. Specific to ceramics it manufactures, among other things, stator vane segments, turbine rotors, gun tube liners, seal rings, compressor components and fuel metering. Considering its market position,

it is has the capability to commercialize the materials developed under the subcontract.

AlliedSignal's financial investment related to ceramic development includes in excess of \$16.5 million for ceramics, processing technology and equipment. Additionally, AlliedSignal has made substantial contributions under a DOE contract for ceramic matrix composites and for advanced heat engines, in-situ toughened material development, advanced turbine technology applications. It is committing resources previously used in these activities, such as personnel, equipment, and expertise, to develop the materials under this subcontract.

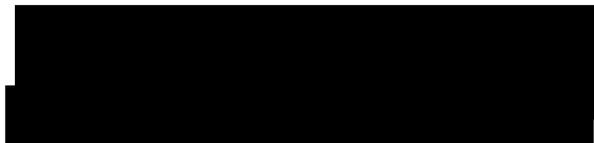
The subcontract has been executed and contains the standard DOE waiver terms and conditions, approved by AlliedSignal, including march-in rights, retention by the government of a license, preference for U.S. industry, and U.S. Competitiveness clauses. The advance patent waiver also contains a paragraph that limits AlliedSignal's ability to alienate waived rights. Specifically, AlliedSignal shall not transfer rights in any invention without prior approval of DOE. Also, should there be a change in ownership of AlliedSignal, rights in inventions will be suspended until approval by DOE of the entity obtaining controlling interest having the waiver.

AlliedSignal agrees that any product, process or service used or sold by it or its affiliates embodying subject inventions must be manufactured, practiced or provided substantially in the United States, and further, any license or other transfer in rights of a Subject Invention to third parties must be approved by DOE prior to any such transfer.

Granting of the waiver should have little effect on competition since there are several technology options, this being one of many previously or yet-to-be developed in the marketplace, therefore there should not be undue market concentration of AlliedSignal products.

Grant of the requested waiver should serve as encouragement to other DOE contractors and subcontractors that significant cost sharing will be recognized as an acceptable consideration for granting greater rights in Subject Inventions.

In view of the acceptable level of cost sharing by AlliedSignal and the objectives and considerations set forth in 41 CFR 9-9.109, all of which have been considered, it is recommended that the requested waiver for worldwide rights be granted.



Katherine Lovingood
Senior Patent Attorney

Based on the foregoing Statement of Considerations and the representations in the attached Waiver Petition, it is determined that the interest of the United States and the general public will best be served by a waiver of U.S. and foreign patent rights, and therefore, the waiver is granted. This waiver shall not apply to a modification or extension of the cost-shared subcontract where, through such a modification or extension, the purpose, scope or cost of the subcontract has been substantially altered.

CONCURRENCE:



Thomas J. Gross
Deputy Assistant Secretary for
Transportation Technologies

Date: 6/10/96

APPROVAL:



Paul A. Gottlieb
Assistant General Counsel
for Intellectual Property

Date: 6-10-96

WAIVER ACTION ABSTRACT

REQUESTOR

Allied-Signal
Ceramic Components

CONTRACT SCOPE OF WORK

Development of silicon
nitride ceramic materials
for advanced heat engine
components

RATIONALE FOR DECISION

Cost sharing 20% of the
subcontract. A waiver
has already been granted
for Phase I, Petitioners
situation is unchanged.

DISPOSITION

Grant Waiver